

**We claim:**

1. A method for determining a mask-fit test pressure to be applied to a wearer's mask by ventilatory assistance apparatus, the method comprising the step of:  
5 determining a percentile pressure of a previous ventilatory assistance session to be said test pressure.

2. The method of claim 1, whereby said percentile pressure is chosen from the range of the 75<sup>th</sup> - 95<sup>th</sup> percentile pressure.

3. The method of claim 2, comprising the further step of:  
if there is no previous percentile pressure available, then determining that a base pressure to be said test pressure.

4. The method of claim 3, whereby said base pressure is in the range 10-12 cmH<sub>2</sub>O.

5. The method of claim 4, comprising the further step of:  
determining that a previous pressure is available if a pressure ventilatory  
20 assistance session occurred for greater than a predetermined time interval.

6. The method of claim 5, whereby said predetermined time interval is three hours.

7. A method for assessing correct fitting of a mask delivering ventilatory assistance, provided by ventilatory assistance apparatus, to a wearer of the mask, the method comprising the steps of:

determining a percentile pressure of a previous ventilatory assistance session to be applied as a test pressure;

determining leak flow from said mask at the test pressure; and

displaying or otherwise indicating the magnitude of the leak flow as an indication of correct mask fitting.

8. The method of claim 7, whereby said leak flow is quantised to  
35 represent a degree of leak.

9. The method of claim 8, comprising the further steps of:  
comparing said leak flow against a threshold value representing zero degree of  
leak; and

5 determining that there is correct mask fitting if the threshold is not exceeded.

10. The method of claim 9, comprising the further step of:  
if there is no previous percentile pressure available, then determining a base  
pressure to be applied as said test pressure.

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11. The method of claim 10, whereby said percentile pressure is chosen  
from the range of the 75<sup>th</sup> - 95<sup>th</sup> percentile pressure.

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12. The method of claim 11, whereby said base pressure is in the range  
10-12 cmH<sub>2</sub>O.

13. The method of claim 12, comprising the further step of:  
determining that a previous pressure is available if a pressure ventilatory  
assistance session occurred for greater than a predetermined time interval.

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14. The method of claim 13, whereby said predetermined time interval is  
three hours.

15. Ventilatory assistance apparatus comprising:  
25 a controllable flow generator providing a positive pressure of breathable gas;  
a conduit coupled to the flow generator to receive said gas;  
a mask to be worn by a wearer, in turn, to receive said gas from said conduit at  
a desired pressure; and

30 a controller having control of said flow generator, and operable to cause a  
mask-fit test pressure to be applied at the mask, said test pressure being determined as a  
percentile pressure of a previous ventilatory assistance session.

16. The apparatus of claim 15, further comprising:  
flow sensor means, for sensing respiratory flow, passing a flow signal to the  
35 controller; and

display or indication means; and

wherein the controller is further operable to determine mask leak flow at the test pressure from the respiratory flow signal, and to cause the display or indication means to display or otherwise indicate the magnitude of the leak flow as an indication of correct mask fitting.

17. The apparatus of claim 16, wherein said controller quantises said leak flow to represent a degree of leak.

18. The apparatus of claim 17, wherein the controller is further operable to compare said leak flow against a threshold value representing zero degree of leak, and to determine that there is correct mask fitting if the threshold is not exceeded.

19. The apparatus of claim 18, wherein, if there is no previous percentile pressure available, then the controller determines that a base pressure is to be applied, as said test pressure.

20. The apparatus of claim 19, wherein said percentile pressure is chosen from the range of the 75<sup>th</sup> - 95<sup>th</sup> percentile pressure.

21. The apparatus of claim 20, wherein said base pressure is in the range 10-12 cmH<sub>2</sub>O.

22. The apparatus of claim 21, wherein said controller is further operable to determine that a previous pressure is available if a previous ventilatory assistance session occurred for greater than a predetermined time interval.

23. The apparatus of claim 22, wherein said predetermined time interval is three hours.

24. The apparatus of claim 16, wherein the controller further has a manual pressure mode in which the currently set ventilatory assistance pressure is chosen to be applied as the test pressure.

25. The apparatus of claim 24, wherein said controller applies the test pressure for a period of time.

26. The apparatus as claimed in claim 25, wherein said time is three  
5 minutes.

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